Claims:

1 – 18 (canceled)

19. (previously presented) A high temperature gas turbine component comprising:

a root section;

a platform section arranged adjacent to the root section;

a tip section arranged radially opposite the root section;

a leading edge arranged between the platform and tip sections;

a trailing edge arranged downstream of the leading edge; and

a main section arranged between the leading edge, trailing edge, platform section and tip sections,

wherein, a superalloy is precipitation strengthened by the addition of 50 ppm to 2000 ppm of a strength promoter selected from the group consisting of:

zinc (Zn),
tin (Sn),
lead (Pb),
gallium (Ga),
calcium (Ca),
selenium (Se),
arsenic (As),
bismuth (Bi),
neodymium (Nd), and
praseodymium (Pr).

20. (previously presented) The component as claimed in claim 19, wherein the high temperature gas turbine component is a turbine blade or vane.

21. (previously presented) The component as claimed in claim 20, wherein the superalloy, further comprises (percent by weight):

11 - 13% chromium,

3 - 5% tungsten,

0.5 - 2.5% molybdenum,

3 - 5% aluminum,

3 - 5% titanium,

3 - 7% tantalum,

0 - 12% cobalt,

0 - 1% niobium,

0 - 2% hafnium,

0 - 1% zirconium,

0 - 0.05% boron,

0 - 0.2% carbon,

0.1 - 10% rhenium or ruthenium, and

remainder nickel, cobalt or iron and impurities.

22. (previously presented) The component as claimed in claim 20, wherein the superalloy further comprises (percent by weight):

9 - <11% chromium,

3 - 5% tungsten,

0.5 - 2.5% molybdenum,

3 - 5% aluminum,

3 - 5% titanium,

3 - 7% tantalum,

0 - 12% cobalt,

0 - 1% niobium,

0 - 2% hafnium,

0 - 1% zirconium,

0 - 0.05% boron,

0 - 0.2% carbon,

0.1 - 5% ruthenium, or rhenium, and

remainder nickel, cobalt or iron and impurities.

23. (previously presented) A gas turbine high temperature resistant component made from a precipitant containing alloy, comprising:

a metallic strength promoter in an amount of 50 ppm to 2000 ppm that increases the strength of the component by increasing the formation of precipitants where the strength promoter is selected from the group consisting of:

zinc (Zn),

tin (Sn),

lead (Pb),

gallium (Ga),

calcium (Ca),

selenium (Se),

arsenic (As),

bismuth (Bi),

neodymium (Nd), and

praseodymium (Pr).

24. (previously presented) The component as claimed in claim 23, wherein the component consists of a nickel-base, cobalt-base or iron-base superalloy.

25. (previously presented) The component as claimed in claim 23, wherein the alloy contains up to 1100 ppm of the strength promoter.

26. (previously presented) The component as claimed in claim 25, wherein the alloy contains between 100 to 500 ppm of the strength promoter.

27. (previously presented) The component as claimed in claim 24, wherein the alloy, further comprises (percent by weight):

11 - 13% chromium,

3 - 5% tungsten,

0.5 - 2.5% molybdenum,

3 - 5% aluminum,

3 - 5% titanium,

3 - 7% tantalum,

0 - 12% cobalt,

0 - 1% niobium,

0 - 2% hafnium,

0 - 1% zirconium,

0 - 0.05% boron,

0 - 0.2% carbon,

0.1 - 10% rhenium or ruthenium, and

remainder nickel, cobalt or iron and impurities.

28. (previously presented) The component as claimed in claim 24, wherein the alloy further comprises (percent by weight):

9 - <11% chromium,

3 - 5% tungsten,

0.5 - 2.5% molybdenum,

3 - 5% aluminum,

3 - 5% titanium,

3 - 7% tantalum,

0 - 12% cobalt,

0 - 1% niobium,

0 - 2% hafnium,

0 - 1% zirconium,

0 - 0.05% boron,

0 - 0.2% carbon,

0.1 - 5% ruthenium, or rhenium, and

remainder nickel, cobalt or iron and impurities.

29. (previously presented) The component as claimed in claim 28, wherein the alloy contains 3 - less than 3.5 aluminum percent by weight.

30. (previously presented) The component as claimed in claim 27, wherein the rhenium content is 1.3 - 10 percent by weight.

31. (previously presented) The component as claimed in claim 27, wherein the rhenium content is 1.3 - 5 percent by weight.

32 (previously presented) The component as claimed in claim 31, wherein the ruthenium content is 1.3 - 3 percent by weight.

33. (previously presented) The component as claimed in claim 28 wherein the ruthenium content is 0.5 - 5 percent by weight.

34. (previously presented) The component as claimed in claim 33, wherein the component material has an isotropic distribution, directionally solidified, or single-crystal grain structure.

35. (previously presented) The component as claimed in claim 33, wherein the component is a gas turbine blade, vane or combustion chamber component.

36. (previously presented) The component as claimed in claim 24, wherein the precipitation is the gamma phase.

37. (previously presented) The component as claimed in claim 23, wherein the strength promoter is present in an amount of 75 ppm to 2000 ppm.

38. (previously presented) A gas turbine engine, comprising:

a rotationally mounted rotor arranged coaxially with the longitudinal axis of the engine;

an intake housing arranged coaxially with the rotor that intakes a working fluid;

a compressor that compresses the working fluid;

an annular combustion chamber comprised of a plurality of components that accepts the compressed working fluid, mixes a fuel with the compressed working fluid and combusts the compressed working fluid and fuel mixture to create a hot working fluid; and

a turbine section that expands the hot working fluid, wherein at least one combustion chamber or turbine component is formed from a nickel, cobalt or iron superalloy that is precipitation strengthened by the addition of 50 ppm to 2000 ppm of a strength promoter from the group consisting of:

zinc (Zn),
tin (Sn),
lead (Pb),
gallium (Ga),
calcium (Ca),
selenium (Se),
arsenic (As),
bismuth (Bi),
neodymium (Nd), and
praseodymium (Pr).